

SEQUENCE LISTING

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<120> GRB14 AND THE INSULIN RECEPTOR AND SCREENING OF NOVEL MEDICINES

<130> 45636-5051

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<141> 2001-09-17

<160> 28

<170> PatentIn Ver. 2.1

<210> 1

<211> 43

<212> PRT

<213> Rattus sp.

<400> 1

Pro Met Arg Ser Val Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser 1 5 10 15

Gly Gln Lys Thr Arg Val Ile Asp Asn Pro Thr Glu Ala Leu Ser Val 20 25 30

Ala Val Glu Glu Gly Leu Ala Trp Arg Lys Lys 35

<210> 2

<211> 84

<212> PRT

<213> Rattus sp.

<400> 2

Gln Ala Arg Ser Ala Cys Ser Ser Gln Ser Val Ser Pro Met Arg Ser 1 10 15

Val Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser Gly Gln Lys Thr 20 25 30

Arg Val Ile Asp Asn Pro Thr Glu Ala Leu Ser Val Ala Val Glu Glu 35 40

Gly Leu Ala Trp Arg Lys Lys Gly Cys Leu Arg Leu Gly Asn His Gly 50 60

Ser Pro Thr Ala Pro Ser Gln Ser Ser Ala Val Asn Met Ala Leu His 65 70 75 80

Arg Ser Gln Pro

<210> 3 <211> 174 <212> PRT <213> Rattus sp.

Gly Gln Lys Thr Arg Val Ile Asp Asn Pro Thr Glu Ala Leu Ser Val 20 25 30

Ala Val Glu Gly Leu Ala Trp Arg Lys Lys Gly Cys Leu Arg Leu
35 40 45

Gly Asn His Gly Ser Pro Thr Ala Pro Ser Gln Ser Ser Ala Val Asn 50 55 60

Met Ala Leu His Arg Ser Gln Pro Trp Phe His His Arg Ile Ser Arg 65 70 75 80

Asp Glu Ala Gln Gln Leu Ile Thr Arg Gln Gly Pro Val Asp Gly Val
85 90 95

Phe Leu Val Arg Asp Ser Gln Ser Asn Pro Arg Thr Phe Val Leu Ser 100 105 110

Met Ser His Gly Gln Lys Ile Lys His Phe Gln Ile Ile Pro Val Glu 115 120 125

Asp Asp Gly Glu Val Phe His Thr Leu Asp Asp Gly His Thr Lys Phe 130 140

Thr Asp Leu Ile Gln Leu Val Glu Phe Tyr Gln Leu Asn Lys Gly Val 145 150 155 160

Leu Pro Cys Lys Leu Lys His Tyr Cys Ala Arg Met Ala Val 165 170

<210> 4

<211> 186

<212> PRT

<213> Rattus sp.

<400> 4

Gln Ala Arg Ser Ala Cys Ser Ser Gln Ser Val Ser Pro Met Arg Ser 1 5 10 15

Val Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser Gly Gln Lys Thr

Arg Val Ile Asp Asn Pro Thr Glu Ala Leu Ser Val Ala Val Glu Glu 35 40 45

Gly Leu Ala Trp Arg Lys Lys Gly Cys Leu Arg Leu Gly Asn His Gly 50 55 60

Ser Pro Thr Ala Pro Ser Gln Ser Ser Ala Val Asn Met Ala Leu His Arg Ser Gln Pro Trp Phe His His Arg Ile Ser Arg Asp Glu Ala Gln Gln Leu Ile Thr Arg Gln Gly Pro Val Asp Gly Val Phe Leu Val Arg Asp Ser Gln Ser Asn Pro Arg Thr Phe Val Leu Ser Met Ser His Gly Gln Lys Ile Lys His Phe Gln Ile Ile Pro Val Glu Asp Asp Gly Glu 135 Val Phe His Thr Leu Asp Asp Gly His Thr Lys Phe Thr Asp Leu Ile Gln Leu Val Glu Phe Tyr Gln Leu Asn Lys Gly Val Leu Pro Cys Lys Leu Lys His Tyr Cys Ala Arg Met Ala Val <210> 5 <211> 43 <212> PRT <213> Homo sapiens Pro Met Arg Ser Ile Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser Gly Gln Lys Ser Arg Val Ile Glu Asn Pro Thr Glu Ala Leu Ser Val Ala Val Glu Glu Gly Leu Ala Trp Arg Lys Lys <210> 6 <211> 84 <212> PRT <213> Homo sapiens Gln Gly Arg Ser Gly Cys Ser Ser Gln Ser Ile Ser Pro Met Arg Ser Ile Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser Gly Gln Lys Ser 25 Arg Val Ile Glu Asn Pro Thr Glu Ala Leu Ser Val Ala Val Glu Glu Gly Leu Ala Trp Arg Lys Lys Gly Cys Leu Arg Leu Gly Thr His Gly

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Ser Pro Thr Ala Ser Ser Gln Ser Ser Ala Thr Asn Met Ala Ile His 65 70 75 80
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Arg Ser Gln Pro

<210> 7 <211> 174 <212> PRT <213> Homo sapiens

Gly Gln Lys Ser Arg Val Ile Glu Asn Pro Thr Glu Ala Leu Ser Val 20 25 30

Ala Val Glu Glu Gly Leu Ala Trp Arg Lys Lys Gly Cys Leu Arg Leu 35 40 45

Gly Thr His Gly Ser Pro Thr Ala Ser Ser Gln Ser Ser Ala Thr Asn 50 55 60

Met Ala Ile His Arg Ser Gln Pro Trp Phe His His Lys Ile Ser Arg 65 70 75 80

Asp Glu Ala Gln Arg Leu Ile Ile Gln Gln Gly Leu Val Asp Gly Val 85 90 95

Phe Leu Val Arg Asp Ser Gln Ser Asn Pro Lys Thr Phe Val Leu Ser 100 105 110

Met Ser His Gly Gln Lys Ile Lys His Phe Gln Ile Ile Pro Val Glu 115 120 125

Asp Asp Gly Glu Met Phe His Thr Leu Asp Asp Gly His Thr Arg Phe 130 135 140

Thr Asp Leu Ile Gln Leu Val Glu Phe Tyr Gln Leu Asn Lys Gly Val 145 150 155 160

Leu Pro Cys Lys Leu Lys His Tyr Cys Ala Arg Ile Ala Leu 165 170

<210> 8 <211> 186 <212> PRT <213> Homo sapiens

Ile Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser Gly Gln Lys Ser 20 · 25 30

Arg Val Tle Glu Asn Pro Thr Glu Ala Leu Ser Val Ala Val Glu Glu 40 Gly Leu Ala Trp Arg Lys Lys Gly Cys Leu Arg Leu Gly Thr His Gly Ser Pro Thr Ala Ser Ser Gln Ser Ser Ala Thr Asn Met Ala Ile His Arg Ser Gln Pro Trp Phe His His Lys Ile Ser Arg Asp Glu Ala Gln Arg Leu Ile Ile Gln Gln Gly Leu Val Asp Gly Val Phe Leu Val Arg Asp Ser Gln Ser Asn Pro Lys Thr Phe Val Leu Ser Met Ser His Gly 120 Gln Lys Ile Lys His Phe Gln Ile Ile Pro Val Glu Asp Asp Gly Glu 135 Met Phe His Thr Leu Asp Asp Gly His Thr Arg Phe Thr Asp Leu Ile 155 145 150 Gln Leu Val Glu Phe Tyr Gln Leu Asn Lys Gly Val Leu Pro Cys Lys Leu Lys His Tyr Cys Ala Arg Ile Ala Leu <210> 9 <211> 43 <212> PRT <213> mus muris <400> 9 Pro Met Arg Ser Val Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser Gly Gln Ile Gly Arg Val Ile Asp Asn Pro Ala Glu Ala Gln Ser Ala Ala Leu Glu Glu Gly His Ala Trp Arg Asn Gly 40 <210> 10 <211> 82 <212> PRT <213> mus muris

Pro Gln Arg Lys Gly Leu Pro Pro Pro Phe Asn Ala Pro Met Arg Ser 1 10 15

Val Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser Gly Gln Ile Gly 20 25 30

<400> 10

Arg Val Tle Asp Asn Pro Ala Glu Ala Gln Ser Ala Ala Leu Glu Glu 35 40 45

Gly His Ala Trp Arg Asn Gly Ser Thr Arg Met Asn Ile Leu Ser Ser 50 55 60

Gln Ser Pro Leu His Pro Ser Thr Leu Asn Ala Val Ile His Arg Thr 65 70 75 80

Gln His

<210> 11

<211> 172

<212> PRT

<213> mus muris

<400> 11

Pro Met Arg Ser Val Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser 1 5 10 15

Gly Gln Ile Gly Arg Val Ile Asp Asn Pro Ala Glu Ala Gln Ser Ala 20 25 30

Ala Leu Glu Gly His Ala Trp Arg Asn Gly Ser Thr Arg Met Asn 35 40 45

Ile Leu Ser Ser Gln Ser Pro Leu His Pro Ser Thr Leu Asn Ala Val 50 55 60

Ile His Arg Thr Gln His Trp Phe His Gly Arg Ile Ser Arg Glu Glu 65 70 75 80

Ser His Arg Ile Ile Lys Gln Gln Gly Leu Val Asp Gly Leu Phe Leu 85 90 95

Leu Arg Asp Ser Gln Ser Asn Pro Lys Ala Phe Val Leu Thr Leu Cys 100 105 110

His His Gln Lys Ile Lys Asn Phe Gln Ile Leu Pro Cys Glu Asp Asp 115 120 125

Gly Gln Thr Phe Phe Thr Leu Asp Asp Gly Asn Thr Lys Phe Ser Asp 130 135 140

Leu Ile Gln Leu Val Asp Phe Tyr Gln Leu Asn Lys Gly Val Leu Pro 145 150 155 160

Cys Lys Leu Lys His His Cys Ile Arg Val Ala Leu 165 170

<210> 12

<211> 184

<212> PRT

<213> mus muris

<400> 12

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Pro Gln Arg Lys Gly Leu Pro Pro Pro Phe Asn Ala Pro Met Arg Ser
                                     10
Val Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser Gly Gln Ile Gly
Arg Val Ile Asp Asn Pro Ala Glu Ala Gln Ser Ala Ala Leu Glu Glu
Gly His Ala Trp Arg Asn Gly Ser Thr Arg Met Asn Ile Leu Ser Ser
Gln Ser Pro Leu His Pro Ser Thr Leu Asn Ala Val Ile His Arg Thr
Gln His Trp Phe His Gly Arg Ile Ser Arg Glu Glu Ser His Arg Ile
Ile Lys Gln Gln Gly Leu Val Asp Gly Leu Phe Leu Leu Arg Asp Ser
Gln Ser Asn Pro Lys Ala Phe Val Leu Thr Leu Cys His His Gln Lys
                            120
Ile Lys Asn Phe Gln Ile Leu Pro Cys Glu Asp Asp Gly Gln Thr Phe
                        135
Phe Thr Leu Asp Asp Gly Asn Thr Lys Phe Ser Asp Leu Ile Gln Leu
                    150
                                        155
145
Val Asp Phe Tyr Gln Leu Asn Lys Gly Val Leu Pro Cys Lys Leu Lys
His His Cys Ile Arg Val Ala Leu
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<210> 13 <211> 43 <212> PRT <213> Homo sapiens

Gly Gln Thr Gly Arg Val Ile Glu Asn Pro Ala Glu Ala Gln Ser Ala 20 25 30

Ala Leu Glu Gly His Ala Trp Arg Lys Arg 35

<210> 14 <211> 82 <212> PRT <213> Homo sapiens <400> 14

Gln 1	Gln	Arg	Lys	Ala 5	Leu	Leu	Ser	Pro	Phe 10	Ser	Thr	Pro	Val	Arg 15	Ser
Val	Ser	Glu	Asn 20	Ser	Leu	Val	Ala	Met 25	Asp	Phe	Ser	Gly	Gln 30	Thr	Gly
Arg	Val	Ile 35	Glu	Asn	Pro	Ala	Glu 40	Ala	Gln	Ser	Ala	Ala 45	Leu	Glu	Glu
Gly	His 50	Ala	Trp	Arg	Lys	Arg 55	Ser	Thr	Arg	Met	Asn 60	Ile	Leu	Gly	Ser
Gln 65	Ser	Pro	Leu	His	Pro 70	Ser	Thr	Leu	Ser	Thr 75	Val	Ile	His	Arg	Thr 80
Gln	His														

<210> 15
<211> 172
<212> PRT
<213> Homo sapiens

<400> 15
Pro Val Arg Ser Val Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser 1
Gly Gln Thr Gly Arg Val Ile Glu Asn Pro Ala Glu Ala Gln Ser Ala 30
Ala Leu Glu Glu Glu His Ala Trp Arg Lys Arg Ser Thr Arg Met Asn 45
Ile Leu Gly Ser Gln Ser Pro Leu His Pro Ser Thr Leu Ser Thr Val 55
Cle His Arg Thr Gln His Trp Phe His Gly Arg Phe Ser Arg Glu Glu 80
Ser His Arg Ile Ile Lys Gln Gln Gln Gly Leu Val Asp Gly Leu Phe Leu Phe Leu Arg Asp Asp Ser Inc Ile Leu Gln Ser Asn Pro Lys Ala Phe Val Leu Thr Leu Cys Ilo Gln Lys Ile Lys Asn Phe Gln Ile Leu Pro Cys Glu Asp Asp Asp

Gly Gln Thr Phe Phe Ser Leu Asp Asp Gly Asn Thr Lys Phe Ser Asp 130

Leu Ile Gln Leu Val Asp Phe Tyr Gln Leu Asn Lys Gly Val Leu Pro 155

Cys Lys Leu Lys His His Cys Ile Arg Val Ala Leu 170

<210> 16 <211> 184 <212> PRT <213> Homo sapiens Gln Gln Arg Lys Ala Leu Leu Ser Pro Phe Ser Thr Pro Val Arg Ser Val Ser Glu Asn Ser Leu Val Ala Met Asp Phe Ser Gly Gln Thr Gly Arg Val Ile Glu Asn Pro Ala Glu Ala Gln Ser Ala Ala Leu Glu Glu Gly His Ala Trp Arg Lys Arg Ser Thr Arg Met Asn Ile Leu Gly Ser Gln Ser Pro Leu His Pro Ser Thr Leu Ser Thr Val Ile His Arg Thr Gln His Trp Phe His Gly Arg Phe Ser Arg Glu Glu Ser His Arg Ile Ile Lys Gln Gln Gly Leu Val Asp Gly Leu Phe Leu Leu Arg Asp Ser 105 Gln Ser Asn Pro Lys Ala Phe Val Leu Thr Leu Cys His His Gln Lys 120 Ile Lys Asn Phe Gln Ile Leu Pro Cys Glu Asp Asp Gly Gln Thr Phe 135 Phe Ser Leu Asp Asp Gly Asn Thr Lys Phe Ser Asp Leu Ile Gln Leu Val Asp Phe Tyr Gln Leu Asn Lys Gly Val Leu Pro Cys Lys Leu Lys 170 His His Cys Ile Arg Val Ala Leu 180 <210> 17 <211> 43 <212> PRT

<213> Rattus sp.

<400> 17 Pro Leu Arg Ser Val Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser 10

Gly His Ala Gly Arg Val Ile Asp Asn Pro Arg Glu Ala Leu Ser Ala 20

Ala Met Glu Glu Ala Gln Ala Trp Arg Lys Lys

<210> 18 <211> 80 <212> PRT <213> Rattus sp. <400> 18 Ser Arg His Leu Arg Leu Ser Tyr Leu Gly Ser Pro Pro Leu Arg Ser Val Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser Gly His Ala Gly Arg Val Ile Asp Asn Pro Arg Glu Ala Leu Ser Ala Ala Met Glu Glu Ala Gln Ala Trp Arg Lys Lys Thr Asn His Arg Leu Ser Leu Pro Thr 55 Thr Cys Ser Gly Ser Ser Leu Ser Ala Ala Ile His Arg Thr Gln Pro <210> 19 <211> 170 <212> PRT <213> Rattus sp. Pro Leu Arg Ser Val Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser Gly His Ala Gly Arg Val Ile Asp Asn Pro Arg Glu Ala Leu Ser Ala Ala Met Glu Glu Ala Gln Ala Trp Arg Lys Lys Thr Asn His Arg Leu Ser Leu Pro Thr Thr Cys Ser Gly Ser Ser Leu Ser Ala Ala Ile His Arg Thr Gln Pro Trp Phe His Gly Arg Ile Ser Arg Glu Glu Ser Gln Arg Leu Ile Gly Gln Gln Gly Leu Val Asp Gly Val Phe Leu Val Arg Glu Ser Gln Arg Asn Pro Gln Gly Phe Val Leu Ser Leu Cys His Leu 100 105 Gln Lys Val Lys His Tyr Leu Ile Leu Pro Ser Glu Asp Glu Gly Cys 120 Leu Tyr Phe Ser Met Asp Glu Gly Gln Thr Arg Phe Thr Asp Leu Leu Gln Leu Val Glu Phe His Gln Leu Asn Arg Gly Ile Leu Pro Cys Leu 150 155

Leu Arg His Cys Cys Ala Arg Val Ala Leu 165 170

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<210> 20
<211> 182
<212> PRT
<213> Rattus sp.
<400> 20
Ser Arg His Leu Arg Leu Ser Tyr Leu Gly Ser Pro Pro Leu Arg Ser
Val Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser Gly His Ala Gly
Arg Val Ile Asp Asn Pro Arg Glu Ala Leu Ser Ala Ala Met Glu Glu
Ala Gln Ala Trp Arg Lys Lys Thr Asn His Arg Leu Ser Leu Pro Thr
Thr Cys Ser Gly Ser Ser Leu Ser Ala Ala Ile His Arg Thr Gln Pro
Trp Phe His Gly Arg Ile Ser Arg Glu Glu Ser Gln Arg Leu Ile Gly
Gln Gln Gly Leu Val Asp Gly Val Phe Leu Val Arg Glu Ser Gln Arg
Asn Pro Gln Gly Phe Val Leu Ser Leu Cys His Leu Gln Lys Val Lys
His Tyr Leu Ile Leu Pro Ser Glu Asp Glu Gly Cys Leu Tyr Phe Ser
Met Asp Glu Gly Gln Thr Arg Phe Thr Asp Leu Leu Gln Leu Val Glu
                    150
                                        155
Phe His Gln Leu Asn Arg Gly Ile Leu Pro Cys Leu Leu Arg His Cys
            165
Cys Ala Arg Val Ala Leu
            180
<210> 21
<211> 43
<212> PRT
<213> Homo sapiens
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11

Pro Leu Arg Ser Ala Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser

Gly His Ala Gly Arg Val Ile Glu Asn Pro Arg Glu Ala Leu Ser Val

Ala Leu Glu Glu Ala Gln Ala Trp Arg Lys Lys

<211> 80 <212> PRT <213> Homo sapiens <400> 22 Ser Arg His Leu His Pro Ser Cys Leu Gly Ser Pro Pro Leu Arg Ser Ala Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser Gly His Ala Gly Arg Val Ile Glu Asn Pro Arg Glu Ala Leu Ser Val Ala Leu Glu Glu Ala Gln Ala Trp Arg Lys Lys Thr Asn His Arg Leu Ser Leu Pro Met Pro Ala Ser Gly Thr Ser Leu Ser Ala Ala Ile His Arg Thr Gln Leu <210> 23 <211> 170 <212> PRT <213> Homo sapiens <400> 23 Pro Leu Arg Ser Ala Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser Gly His Ala Gly Arg Val Ile Glu Asn Pro Arg Glu Ala Leu Ser Val Ala Leu Glu Glu Ala Gln Ala Trp Arg Lys Lys Thr Asn His Arg Leu Ser Leu Pro Met Pro Ala Ser Gly Thr Ser Leu Ser Ala Ala Ile His Arg Thr Gln Leu Trp Phe His Gly Arg Ile Ser Arg Glu Glu Ser Gln Arg Leu Ile Gly Gln Gln Gly Leu Val Asp Gly Leu Phe Leu Val Arg Glu Ser Gln Arg Asn Pro Gln Gly Phe Val Leu Ser Leu Cys His Leu 105 Gln Lys Val Lys His Tyr Leu Ile Leu Pro Ser Glu Glu Glu Gly Arg 120 Leu Tyr Phe Ser Met Asp Asp Gly Gln Thr Arg Phe Thr Asp Leu Leu 135 Gln Leu Val Glu Phe His Gln Leu Asn Arg Gly Ile Leu Pro Cys Leu

<210> 22

150

Leu Arg His Cys Cys Thr Arg Val Ala Leu 165 170

<210> 24

<211> 182

<212> PRT

<213> Homo sapiens

<400> 24

Ser Arg His Leu His Pro Ser Cys Leu Gly Ser Pro Pro Leu Arg Ser

Ala Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser Gly His Ala Gly 20 25 30

Arg Val Ile Glu Asn Pro Arg Glu Ala Leu Ser Val Ala Leu Glu Glu 35 40 45

Ala Gln Ala Trp Arg Lys Lys Thr Asn His Arg Leu Ser Leu Pro Met 50 55 60

Pro Ala Ser Gly Thr Ser Leu Ser Ala Ala Ile His Arg Thr Gln Leu 65 70 75 80

Trp Phe His Gly Arg Ile Ser Arg Glu Glu Ser Gln Arg Leu Ile Gly 85 90 95

Gln Gln Gly Leu Val Asp Gly Leu Phe Leu Val Arg Glu Ser Gln Arg

Asn Pro Gln Gly Phe Val Leu Ser Leu Cys His Leu Gln Lys Val Lys

His Tyr Leu Ile Leu Pro Ser Glu Glu Glu Gly Arg Leu Tyr Phe Ser 130 135 140

Met Asp Asp Gly Gln Thr Arg Phe Thr Asp Leu Leu Gln Leu Val Glu 145 150 155 160

?

Phe His Gln Leu Asn Arg Gly Ile Leu Pro Cys Leu Leu Arg His Cys 165 170 175

Cys Thr Arg Val Ala Leu 180

<210> 25

<211> 43

<212> PRT

<213> mus muris

<400> 25

Pro Leu Arg Ser Val Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser 1 10 15

Gly His Ala Gly Arg Val Ile Asp Asn Pro Arg Glu Ala Leu Ser Ala 20 25 30 Ala Met Glu Glu Ala Gln Ala Trp Arg Lys Lys

<210> 26

<211> 80

<21:2> PRT

<213> mus muris

<400> 26

Ser Arg His Leu Arg Leu Ser Tyr Leu Gly Ser Pro Pro Leu Arg Ser

Val Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser Gly His Ala Gly

Arg Val Ile Asp Asn Pro Arg Glu Ala Leu Ser Ala Ala Met Glu Glu

Ala Gln Ala Trp Arg Lys Lys Thr Asn His Arg Leu Ser Leu Pro Thr 55

Thr Cys Ser Gly Ser Ser Leu Ser Ala Ala Ile His Arg Thr Gln Pro 70

<210> 27

<211> 170

<212> PRT

<213> mus muris

Pro Leu Arg Ser Val Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser

Gly His Ala Gly Arg Val Ile Asp Asn Pro Arg Glu Ala Leu Ser Ala

Ala Met Glu Glu Ala Gln Ala Trp Arg Lys Lys Thr Asn His Arg Leu

Ser Leu Pro Thr Thr Cys Ser Gly Ser Ser Leu Ser Ala Ala Ile His

Arg Thr Gln Pro Trp Phe His Gly Arg Ile Ser Arg Glu Glu Ser Gln

Arg Leu Ile Gly Gln Gln Gly Leu Val Asp Gly Val Phe Leu Val Arg

Glu Ser Gln Arg Asn Pro Gln Gly Phe Val Leu Ser Leu Cys His Leu

Gln Lys Val Lys His Tyr Leu Ile Leu Pro Ser Glu Asp Glu Gly Cys 120

Leu Tyr Phe Ser Met Asp Glu Gly Gln Thr Arg Phe Thr Asp Leu Leu 135

Leu Arg His Cys Cys Ala Arg Val Ala Leu 165 <210> 28 <211> 182 <212> PRT <213> mus muris <400> 28 Ser Arg His Leu Arg Leu Ser Tyr Leu Gly Ser Pro Pro Leu Arg Ser Val Ser Asp Asn Thr Leu Val Ala Met Asp Phe Ser Gly His Ala Gly Arg Val Ile Asp Asn Pro Arg Glu Ala Leu Ser Ala Ala Met Glu Glu 40 Ala Gln Ala Trp Arg Lys Lys Thr Asn His Arg Leu Ser Leu Pro Thr 55 Thr Cys Ser Gly Ser Ser Leu Ser Ala Ala Ile His Arg Thr Gln Pro Trp Phe His Gly Arg Ile Ser Arg Glu Glu Ser Gln Arg Leu Ile Gly Gln Gln Gly Leu Val Asp Gly Val Phe Leu Val Arg Glu Ser Gln Arg Asn Pro Gln Gly Phe Val Leu Ser Leu Cys His Leu Gln Lys Val Lys 120 His Tyr Leu Ile Leu Pro Ser Glu Asp Glu Gly Cys Leu Tyr Phe Ser 130 Met Asp Glu Gly Gln Thr Arg Phe Thr Asp Leu Leu Gln Leu Val Glu 155 150 Phe His Gln Leu Asn Arg Gly Ile Leu Pro Cys Leu Leu Arg His Cys 165 170 Cys Ala Arg Val Ala Leu 180

Gln Leu Val Glu Phe His Gln Leu Asn Arg Gly Ile Leu Pro Cys Leu

150

155